

REMARKS

This application has been amended so as to place it in condition for immediate allowance at the time of the next Official Action.

The Official Action rejects claims 1-9, 17, 18, and 26-28 under 35 USC §103 as being unpatentable over CHANG (DE 200 05 546) in view of MABUCHI 3,941,618. The Official Action additionally rejects the following sets of claims in view of the same CHANG and MABUCHI references, and further in view of the following additional references: claims 12 and 14 further in view of either MONTELEONE et al. 5,904,414 or PARKER 5,404,281; claims 12 and 13 further in view of KUNG 4,788,112; claims 12 and 15 further in view of BOOE 4,081,397; and claim 16 further in view of LIAN et al. 6,106,969.

The analysis provided in connection with the first obviousness rejection based only on CHANG and MABUCHI, which implicitly underlies each subsequent rejection, identifies the claim elements for which the respective references are offered. Among these, the MABUCHI reference is offered as disclosing a battery cassette which is watertight. The Official Action asserts that this teaches allowing the batteries to be used in water, such as in rain, thereby avoiding negative effects, such as corrosion.

Applicants suggest that the reading of a waterproof or watertight characteristic into the battery case of the MABUCHI

reference may go beyond the actual teaching or suggestion of such reference. As described throughout the narrative portion of the specification and throughout the drawing figures of the MABUCHI patent, the element construed as a "case" is nothing more than a battery cradle. The cradle holds the respective cells in place, but leaves each and every cell utterly exposed to whatever is present outside of the cradle.

The MABUCHI reference does, in fact, make reference to watertight and waterproof characteristics of the overall device into which the battery cradle and the incorporated cells are inserted, and which is served by the energy stored in the cells. Through an electronic word search, applicants have identified the following instances of the words "watertight" and "waterproof" in MABUCHI: column 6, lines 41 and 67; and column 8, lines 11, 21, 36, 49, and 52. Each of the various descriptions of any structure that is watertight or waterproof applies not to the battery case or cradle, but rather to the overall device into which the battery case or cradle is inserted.

Specifically, the first description is with respect to the flashlight embodiment of Figures 10-12 in which there is described an end cover 13 having a spring bearing 13a. The end cover is threadably engaged with the open end portion of a combination handle grip and battery loading portion through packing ring 14 in a watertight manner. Further in connection

with this reference, the switch 23 is provided with a watertight switch cover 24.

In this embodiment, it is clear at least from the illustration of Figure 11 that the battery case 10 is itself utterly exposed to the atmosphere surrounding the case. The non-waterproof case is, however, contained within an overall waterproof device. The waterproof nature of the overall device cannot reasonably be read into the recited battery case of the present claims because independent claim 1 recites that it is the first and second contact segments that are inserted respectively through the first and second through holes in a watertight manner. Such through holes are specifically recited as being formed in the battery case itself. As a result, the mere placement of a water-susceptible battery case within an overall waterproof container fails to teach or suggest the watertight characteristic of the insertion of the contact segments through the through holes of the battery case itself.

The further description of a waterproof characteristic is with respect to the embodiment of Figure 18 of MABUCHI. Such embodiment includes a waterproof O-ring packing 55 which provides a seal adjacent cap 54. In similar manner, packing 61 provides a watertight connection adjacent cap 59. Waterproof oil seal 68 provides water protection adjacent the shaft 52. Finally, the seal 73 over switch 72 provides a watertight seal for the switch.

In a manner analogous to that of the flashlight discussed above, the overall tool illustrated in Figure 18 is a waterproof device, and is made so by virtue of the casing of the device itself. However, the battery case or cradle located within the device clearly lacks any features that would make it waterproof. As it is the first and second contact segments that are inserted through the first and second through holes of the battery case, and the battery case itself that is recited as being waterproof in independent claim 1, such recited characteristic remains neither taught nor suggested by either of the applied references.

Such recitations of independent claim 1 are implicitly recited in all claims depending therefrom.

In a similar manner, independent claim 26 recites a battery case having an elastic member, as well as first and second contact segments that are thrust through the elastic member in a watertight manner so as to make contact with the first and second battery electrodes. This characteristic, like those of independent claim 1 discussed above, is neither taught nor suggested by either of the applied references, including the MABUCHI reference which describes a waterproof device enclosing the water-susceptible battery case, as discussed above.

Independent claim 28 also recites a battery, a battery case, first and second through holes formed in the battery case, and first and second contact segments inserted through the first

and second through holes respectively in a watertight manner to contact the first and second battery electrodes. Such recitations, like those of independent claim 1, are neither taught nor suggested by either of the applied references.

Moreover, the CHANG reference does not disclose the recited characteristic of the battery case having an elastic member at least partially (as recited in claim 26), nor does it disclose a biasing mechanism for keeping the contact segment fitted tightly in the through hole (as claimed in claim 28). Figure 5 of CHANG shows that the biasing mechanism (helical spring 123) functions to keep the battery fitted to the contact segments (pole 5 and plate 122).

The MABUCHI reference also fails to disclose, teach, or suggest these features. Instead of the recited contact segments, MABUCHI teach the use of electrodes of the battery that are connected through connection holes 2a and 2b of the front and rear plate member, as described in column 5, lines 12-18.

For all the reasons discussed above, applicants respectfully suggest that independent claims 1, 26, and 28 each recite features that are non-obvious over the applied references.

The Official Action explicitly notes that claims 10, 11, and 19-25 are allowable but for their dependence from rejected base claims. As discussed above, applicants respectfully suggest that not only such claims, but all other

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original claims in the application are in condition for immediate allowance.

Please note that applicants have added new claims 29 and 30. Each is an independent claim, with claim 29 reciting the features of allowable claim 10, and claim 30 reciting the features of allowable claim 19.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Please charge the fee of \$172 for the two extra independent claims added herewith to Deposit Account No. 25-0120.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

Respectfully submitted,

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